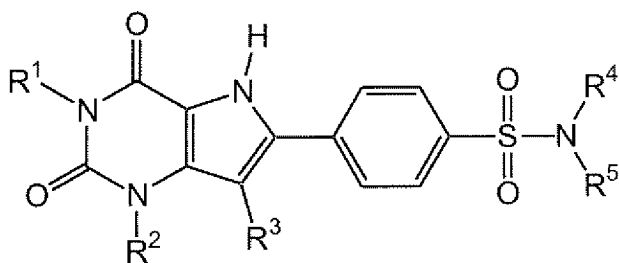


## AMENDMENTS TO THE CLAIMS

Please amend claim 12 and cancel claims 18 and 19 without prejudice or disclaimer. Deletions appear in ~~striketrough font~~, and additions are underlined. This listing of claims below will replace all prior versions and listings of claims in the application.

### Complete listing of claims

1. (Previously presented) A compound of formula (I)



(I)

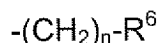
wherein

R<sup>1</sup> and R<sup>2</sup> each independently represents:

a) a hydrogen atom;

b) a hydrocarbon chain chosen from an alkyl, alkenyl and alkynyl groups, wherein said hydrocarbon chain is optionally substituted by one or more substituents chosen from halogen, hydroxy, alkoxy, alkylthio, amino, monoalkylamino, dialkylamino, cyano, oxo, hydroxycarbonyl, alkoxycarbonyl, acylamino, carbamoyl, alkylcarbamoyl, dihydroxyphosphoryloxy and dialkoxyphosphoryloxy groups; or

c) a group of formula



n is an integer from 0 to 4 and

R<sup>6</sup> represents a 3- to 7-membered aromatic or non-aromatic cyclic group containing from 0 to 4 heteroatoms chosen from N, O and S, wherein said 3- to 7-membered aromatic or non-aromatic cyclic group is optionally bridged and/or fused to another 3- to 7-membered aromatic or non-aromatic cyclic group containing from 0 to 4 heteroatoms chosen from N, O and S; and

wherein each of the cyclic groups in the moiety R<sup>6</sup> is independently optionally substituted by one or more R<sup>7</sup> substituents;

R<sup>7</sup> represents a group chosen from halogen, alkyl, alkenyl, alkynyl, aryl, arylalkyl, cycloalkyl, heteroaryl, heteroarylalkyl, heterocyclyl, hydroxy, alkylenedioxy, alkoxy, alkylthio, amino, monoalkylamino, dialkylamino, nitro, cyano, oxo, hydroxycarbonyl, alkoxycarbonyl, acylamino, carbamoyl, alkylcarbamoyl, dihydroxyphosphoryloxy and dialkoxyphosphoryloxy groups;

wherein each of the hydrocarbon chains and each of the cyclic moieties in R<sup>7</sup> is independently optionally substituted by one or more further R<sup>8</sup> substituents;

R<sup>8</sup> represents a group chosen from halogen, hydroxy, oxo, cyano, alkyl, difluoromethyl, trifluoromethyl, alkoxy, alkylenedioxy, alkylthio, acylamino,

carbamoyl, alkylcarbamoyl, dihydroxyphosphoryloxy,  
dialkoxyphosphoryloxy, hydroxyalkoxy, phenyl, alkoxy-carbonyl, amino,  
monoalkylamino, dialkylamino and hydroxycarbonyl groups;

$R^3$  represents a hydrogen or halogen atom, or a nitro, alkoxy-carbonyl or alkyl  
group; wherein the alkyl group is optionally substituted by one or more  
substituents chosen from hydroxy, alkoxy, alkylthio, amino,  
monoalkylamino, dialkylamino, hydroxycarbonyl, alkoxy-carbonyl,  
acylamino, carbamoyl and alkylcarbamoyl groups;

$R^4$  and  $R^5$  are the same or different, each independently representing:

- a) hydrogen;
- b) a group of formula  $-(CH_2)_n-R^6$ ;
- c) or a hydrocarbon chain chosen from alkyl, alkenyl and alkynyl, wherein  
said hydrocarbon chain is optionally substituted by one or more  
substituents chosen from  $-(CH_2)_n-R^6$ ,  $-O-(CH_2)_n-R^6$ ,  $-S-(CH_2)_n-R^6$ ,  $-NH-$   
 $(CH_2)_n-R^6$ , hydroxy, oxo, halogen, alkoxy, alkylthio, amino,  
monoalkylamino, and dialkylamino groups; wherein each of the alkyl  
chains in the alkoxy, alkylthio, monoalkylamino or dialkylamino  
substituents is independently optionally substituted by one or more further  
substituents chosen from  $-(CH_2)_n-R^6$ , hydroxy, oxo, halogen, alkoxy,  
alkylthio, amino, monoalkylamino and dialkylamino groups; wherein each  
 $n$  is independently an integer from 0 to 4 and each  $R^6$  is independently  
chosen from each other; or

d) alternatively,  $R^4$  and  $R^5$ , together with the nitrogen atom to which they are attached, form a 3- to 7-membered aromatic or non-aromatic cyclic group containing from 1 to 4 heteroatoms chosen from N, O and S, wherein said 3- to 7-membered aromatic or non-aromatic cyclic group is optionally bridged and/or fused to another 3- to 7-membered aromatic or non-aromatic cyclic group containing from 0 to 4 heteroatoms chosen from N, O and S;

wherein each of the cyclic groups is independently optionally substituted by one or more substituents chosen from  $-(CH_2)_nR^6$  and  $R^7$ ; wherein each of the hydrocarbon chains and each of the cyclic moieties of the  $R^7$  substituents is independently optionally substituted by one or more further substituents chosen from  $-(CH_2)_nR^6$  and  $R^8$ ; wherein each of the alkyl chains in the  $R^8$  substituents is independently optionally substituted by one or more further substituents chosen from  $-(CH_2)_nR^6$ , hydroxy, halogen, alkoxy, alkylthio, amino, monoalkylamino and dialkylamino groups; wherein each of the  $R^6$  substituents is independently chosen from each other;

or an N-oxide or a pharmaceutically acceptable salt thereof.

2. (Previously presented) A compound according to claim 1, wherein each of  $R^1$  and  $R^2$  independently represents:
  - a) an alkyl group optionally substituted by one or more substituents chosen from hydroxy, halogen, alkoxy, alkylthio, amino, monoalkylamino, dialkylamino, hydroxycarbonyl, and alkoxycarbonyl groups; or

- b) a group of formula  $-(CH_2)_n-R^6$ , wherein n is an integer from 0 to 2 and  $R^6$  represents a 3- to 7-membered aromatic or non-aromatic cyclic group having from 0 to 2 heteroatoms chosen from nitrogen and oxygen.
3. (Original) A compound according to claim 2 wherein  $R^1$  and  $R^2$  are both unsubstituted  $C_1-C_6$  alkyl groups.
4. (Previously presented) A compound according to claim 1, wherein  $R^3$  represents hydrogen or a halogen atom.
5. (Previously presented) A compound according to claim 1, wherein  $R^5$  is hydrogen, a group of formula  $-(CH_2)_n-R^6$  or a hydrocarbon chain chosen from alkyl, alkenyl and alkynyl, wherein said hydrocarbon chain is optionally substituted by one or more groups chosen from  $-(CH_2)_n-R^6$  and  $-(CH_2)_n-O-R^6$ ; wherein each  $R^6$  is independently a phenyl or a pyridyl group, and wherein each  $R^6$  is independently optionally substituted by one or more substituents chosen from halogen, hydroxy, alkyl, alkoxy and alkylthio groups.
6. (Original) A compound according to claim 5, wherein  $R^5$  is hydrogen or an alkyl group.
7. (Previously presented) A compound according to claim 5, wherein  $R^4$  is
- a) hydrogen;
- b) a group of formula  $-(CH_2)_n-R^6$  wherein n is 0, 1 or 2 and  $R^6$  is a 5- to 6-membered heteroaryl or heterocyclyl group containing up to 2 heteroatoms chosen from N, O and S, wherein  $R^6$  is optionally substituted

by a  $R^7$  substituent chosen from alkyl, alkoxy, arylalkyl or heteroarylalkyl groups, wherein each of the aryl and heteroaryl moieties of these arylalkyl and heteroarylalkyl  $R^7$  substituents is independently optionally substituted by 1 or 2 further  $R^8$  substituents chosen from halogen, cyano, alkyl, trifluoromethyl, alkoxy and alkylenedioxy; or

- c) an alkyl group, which is optionally substituted by 1 or 2 substituents chosen from amino, monoalkylamino, dialkylamino,  $-OR^6$  and  $-SR^6$  substituents, wherein  $R^6$  is a 5- or 6- membered heteroaryl group containing 1 or 2 heteroatoms, and is optionally substituted by one or more  $R^7$  substituents chosen from hydroxy, halogen, amino, monoalkylamino, dialkylamino, cyano, hydroxycarbonyl, alkoxycarbonyl, alkoxy, alkylenedioxy and alkylthio; and wherein the alkyl chains of each of the said monoalkylamino and dialkylamino substituents are independently optionally substituted by 1 or 2 further substituents chosen from a hydroxy group and a group of formula  $-(CH_2)_n-R^6$ , wherein n is an integer from 0 to 4 and  $R^6$  is an aryl group.
8. (Previously presented) A compound according to claim 1, wherein  $R^4$  and  $R^5$  form, together with the nitrogen atom to which they are attached, an optionally bridged 5- to 7-membered aromatic or non-aromatic cyclic group, which contains up to two nitrogen atoms, and which is optionally substituted by a group of formula  $-(CH_2)_n-R^6$  or by a  $R^7$  substituent chosen from alkyl, alkenyl and alkynyl chains; wherein each of said alkyl, alkenyl and alkynyl chains is independently optionally substituted by one or more groups of formula  $-(CH_2)_n-R^6$  or  $R^8$

substituents chosen from hydroxy, halogen, alkoxy, alkylthio, amino, monoalkylamino, and dialkylamino groups; wherein each of the alkyl chains in these  $R^8$  substituents is independently optionally substituted by one or more further substituents chosen from a group of formula  $-(CH_2)_n-R^6$ , and hydroxy, halogen, alkoxy, alkylthio, amino, monoalkylamino and dialkylamino groups; wherein each of the  $R^6$  groups is independently chosen from each other.

9. (Previously presented) A compound according to claim 8, wherein  $R^4$  and  $R^5$  form, together with the N atom to which they are attached, a 5-, 6- or 7-membered saturated heterocyclic group, which contains 1 or 2 nitrogen atoms and which optionally carries a bridging alkylene group, wherein said saturated heterocyclic cyclic group is optionally substituted by a group of formula  $-(CH_2)_n-R^6$  wherein n is 0, 1 or 2 and  $R^6$  is a 5- or 6- membered aromatic or non-aromatic ring containing 0, 1 or 2 heteroatoms chosen from N, O and S, or by a  $R^7$  substituent chosen from alkyl and alkenyl groups, wherein the group  $R^6$  is optionally substituted by 1, 2 or 3 further substituents chosen from haloalkyl, alkyl, alkoxy, alkylenedioxy, cyano and halogen groups, and the said  $R^7$  substituent is optionally substituted by 1 or 2 phenyl substituents.
10. (Previously presented) A compound according to claim 1 chosen from:  
4-(1,3-Dimethyl-2,4- dioxo-2,3,4,5-tetrahydro-1*H*-pyrrolo[3,2-*d*]pyrimidin-6-yl)-N-[2-(pyridin-2-yloxy)ethyl]benzenesulfonamide;  
4-(1,3-Dimethyl-2,4-dioxo-2,3,4,5- tetrahydro-1 H-pyrrolo[3,2-*d*]pyrimidin-6-yl)-N-[2-(6 methoxypyridin-2-yloxy)ethyl]benzenesulfonamide;

6-[4-(4-Benzylpiperazine-1-sulphonyl)phenyl]-1,3-dimethyl-1,5-dihydropyrrolo[3,2-*d*]pyrimidine-2,4-dione;

6-{4-[4-(4-Fluorobenzyl)piperazine-1-sulphonyl]phenyl}-1-methyl-3-propyl-1,5-dihydropyrrolo[3,2-*d*]pyrimidine-2,4-dione;

6-[4-(4-Benzo[1,3]dioxol-5-ylmethyl)piperazine-1-sulphonyl]phenyl]-1-methyl-3-propyl-1,5-dihydropyrrolo[3,2-*d*]pyrimidine-2,4-dione;

6-{4-[4-(3-Fluorobenzyl)piperazine-1-sulphonyl]phenyl}-1,3-dimethyl-1,5-dihydropyrrolo[3,2-*d*]pyrimidine-2,4-dione;

1-Methyl-3-propyl-6-[4-(4-pyridin-2-ylpiperazine-1-sulphonyl)phenyl]-1,5-dihydropyrrolo[3,2-*d*]pyrimidine-2,4-dione;

4-(1,3-Dimethyl-2,4-dioxo-2,3,4,5-tetrahydro-1*H*-pyrrolo[3,2-*d*]pyrimidin-6-yl)-*N*-(2-pyridin-2-ylethyl)benzenesulphonamide;

4-(1-Methyl-2,4-dioxo-3-propyl-2,3,4,5-tetrahydro-1*H*-pyrrolo[3,2-*d*]pyrimidin-6-yl)-*N*-(2-pyridin-2-ylethyl)benzenesulphonamide;

4-(1,3-Dimethyl-2,4-dioxo-2,3,4,5-tetrahydro-1*H*-pyrrolo[3,2-*d*]pyrimidin-6-yl)-*N*-pyridin-2-ylbenzenesulphonamide;

4-(1,3-Dimethyl-2,4-dioxo-2,3,4,5-tetrahydro-1*H*-pyrrolo[3,2-*d*]pyrimidin-6-yl)-*N*-(6-methoxypyridin-3-yl)benzenesulphonamide;

6-{4-[4-(5-Chlorothiophen-2-ylmethyl)piperazine-1-sulphonyl]phenyl}-1,3-dimethyl-1,5-dihydropyrrolo[3,2-*d*]pyrimidine-2,4-dione;

6-{4-[4-(5-Chlorothiophen-2-ylmethyl)piperazine-1-sulphonyl]phenyl}-1,3-diethyl-1,5-dihydropyrrolo[3,2-*d*]pyrimidine-2,4-dione;

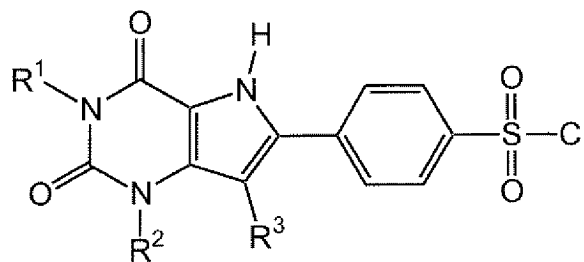


*N*-(1-Benzylpiperidin-4-yl)-4-(2,4-dioxo-1,3-dipropyl-2,3,4,5-tetrahydro-1*H*-pyrrolo[3,2-*d*]pyrimidin-6-yl)benzenesulphonamide;

4-(1,3-Diethyl-2,4-dioxo-2,3,4,5-tetrahydro-1*H*-pyrrolo[3,2-*d*]pyrimidin-6-yl)-*N*-[1-(4-fluorobenzyl)piperidin-4-yl]benzenesulphonamide;

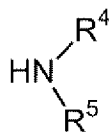
or a pharmaceutically acceptable salt or an N-oxide thereof.

11. (Previously presented) A process for producing a compound of formula I as claimed in claim 1, comprising reacting a sulphonyl chloride of formula II



(II)

with the corresponding amine III

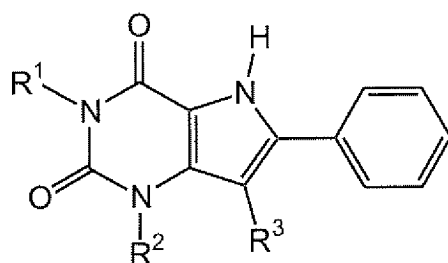


(III)

and

optionally converting the product of the reaction into the corresponding N-oxide or pharmaceutically acceptable salt thereof.

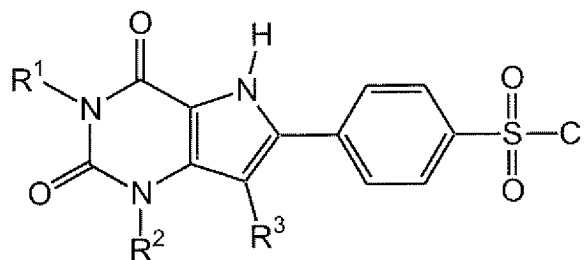
12. (Currently amended) A process according to claim 11, wherein the sulphonyl chloride of formula II is obtained from the corresponding compound of formula IV:



(IV)

by reaction with an excess of chlorosulphonic acid.

13. (Previously presented) A compound of formula II



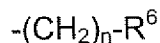
(II)

wherein

R<sup>1</sup> and R<sup>2</sup> each independently represents:

- a) a hydrogen atom;
- b) a hydrocarbon chain chosen from an alkyl, alkenyl and alkynyl group, wherein said hydrocarbon chain is optionally substituted by one or more substituents chosen from halogen, hydroxy, alkoxy, alkylthio, amino, monoalkylamino, dialkylamino, cyano, oxo, hydroxycarbonyl, alkoxy carbonyl, acylamino, carbamoyl, alkylcarbamoyl, dihydroxyphosphoryloxy and dialkoxyphosphoryloxy groups; or

c) a group of formula



n is an integer from 0 to 4 and

R<sup>6</sup> represents a 3- to 7-membered aromatic or non-aromatic cyclic group containing from 0 to 4 heteroatoms chosen from N, O and S, wherein said 3- to 7-membered aromatic or non-aromatic cyclic group is optionally bridged and/or fused to another 3- to 7-membered aromatic or non-aromatic cyclic group containing from 0 to 4 heteroatoms chosen from N, O and S;

wherein each of the cyclic groups in the moiety R<sup>6</sup> is independently optionally substituted by one or more R<sup>7</sup> substituents;

R<sup>7</sup> represents a group chosen from halogen, alkyl, alkenyl, alkynyl, aryl, arylalkyl, cycloalkyl, heteroaryl, heteroarylalkyl, heterocyclyl, hydroxy, alkylenedioxy, alkoxy, alkylthio, amino, monoalkylamino, dialkylamino, nitro, cyano, oxo, hydroxycarbonyl, alkoxycarbonyl, acylamino, carbamoyl, alkylcarbamoyl, dihydroxyphosphoryloxy and dialkoxyphosphoryloxy groups;

wherein each of the hydrocarbon chains and each of the cyclic moieties in R<sup>7</sup> is independently optionally substituted by one or more further R<sup>8</sup> substituents;

R<sup>8</sup> represents a group chosen from halogen, hydroxy, oxo, cyano, alkyl, difluoromethyl, trifluoromethyl, alkoxy, alkylenedioxy, alkylthio, acylamino, carbamoyl, alkylcarbamoyl, dihydroxyphosphoryloxy,

dialkoxyphosphoryloxy, hydroxyalkoxy, phenyl, alkoxycarbonyl, amino, monoalkylamino, dialkylamino and hydroxycarbonyl groups;

$R^3$  represents a hydrogen or halogen atom, or a nitro, alkoxycarbonyl or alkyl group; wherein the alkyl group is optionally substituted by one or more substituents chosen from hydroxy, alkoxy, alkylthio, amino, monoalkylamino, dialkylamino, hydroxycarbonyl, alkoxycarbonyl, acylamino, carbamoyl and alkylcarbamoyl groups;  
or an N-oxide or a pharmaceutically acceptable salt thereof.

14. (Cancelled)

15. (Previously presented) A pharmaceutical composition comprising a compound as claimed in claim 1 and a pharmaceutically acceptable diluent or carrier.

Claims 16-19. (Cancelled)